The following instructions are not difficult to follow, and they go on for many pages just because I wanted to put clear photos. All the work required is just a set of unscrewing/screwing being careful not to scratch the camera with screwdrivers.

Front panel

Before to remove the front panel, you have to cock the camera.

Unscrew the screws 1, 2 (see below).

unscrew the screw 3, which blocks the top casing of the cocking lever

!!! CAUTION !!!

the screw that locks the cocking lever is unscrewed in the opposite way, i.e. from left to right

the screw head is flat with two small holes

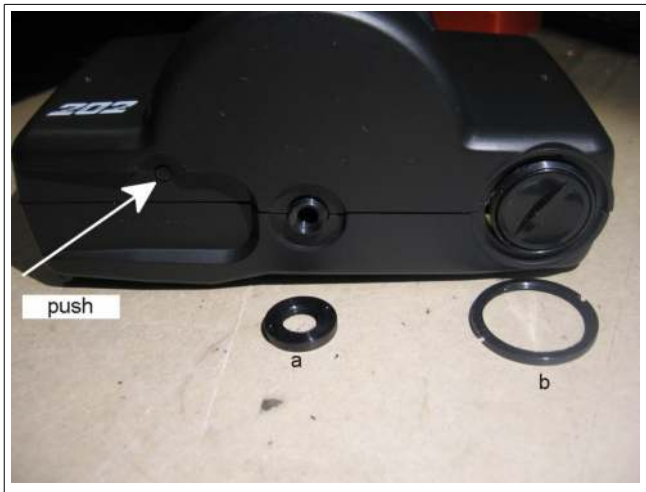
Unscrew the cylindrical screw under the cocking lever

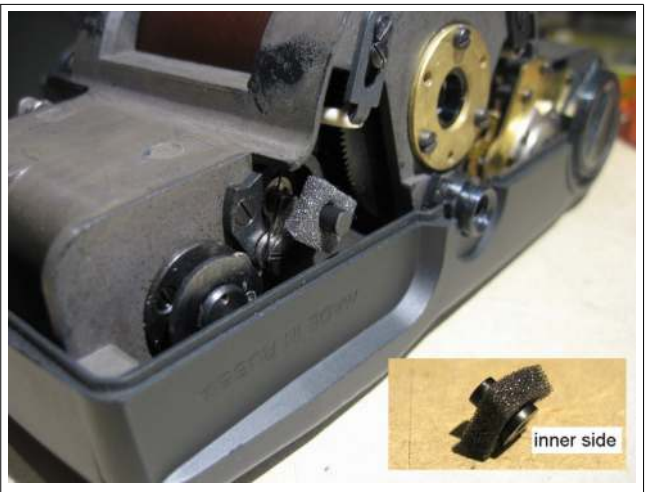
unscrew the shutter button, inside which there is a spring

unscrew the spirit level on the top of the viewfinder tower

(Left figure), unscrew the nuts "a" and "b", then while keeping pressed the rewind button remove the front cover

(Right figure) the rewind button is not fixed but it comes off, it is also rounded by a lightproof seal probably deteriorated (mine was) which therefore must be replaced





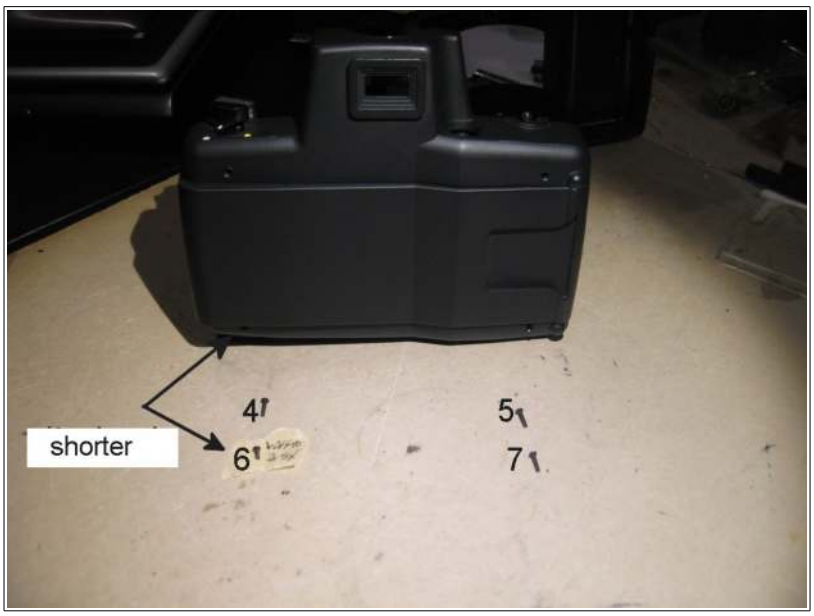
The viewfinder tower is not fixed with screws, so it may be easily removed

OK now the front part has been removed.

Back panel

Unscrew the screws 4, 5, 6 and 7.

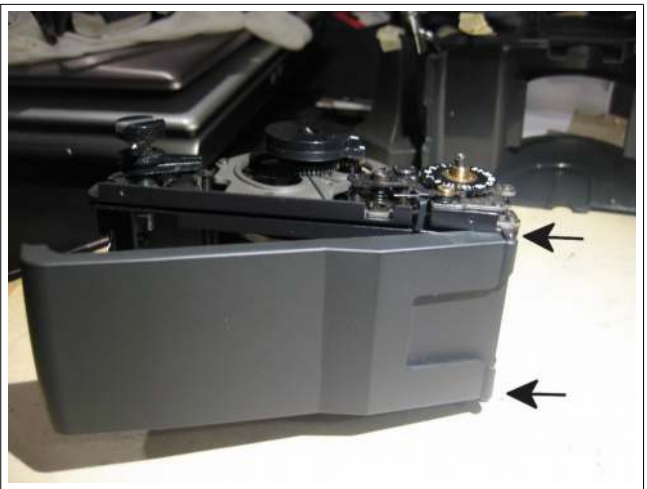
Take note that the screw 6 down left is shorter than the others.



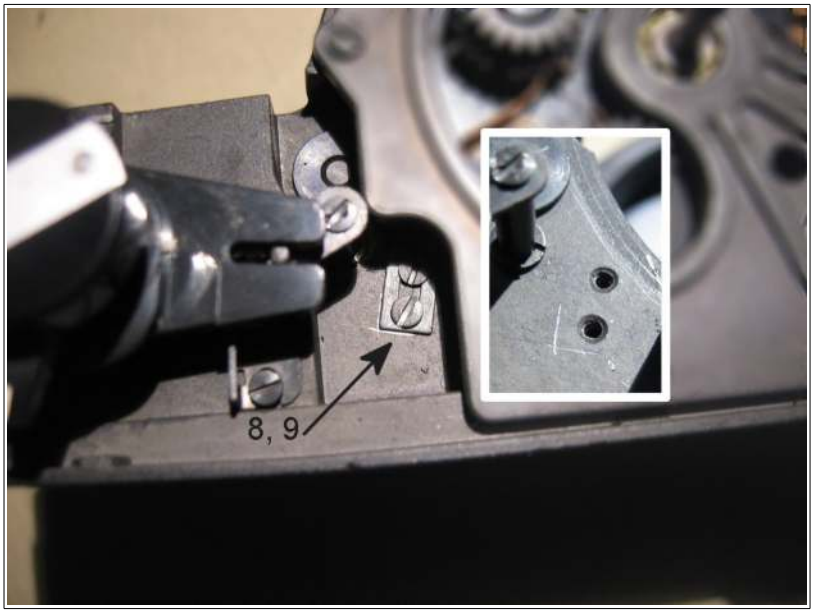
(Left figure) now for removing the back you need to rise the left edge and pry a little bit the frame while pushing it to the right (without bending the frame !) until the back is removed by interlocking with the screws that secure the camera door.

(Right figure) take away the camera door by levering with a screwdriver on the pin holders in which the pins are inserted.

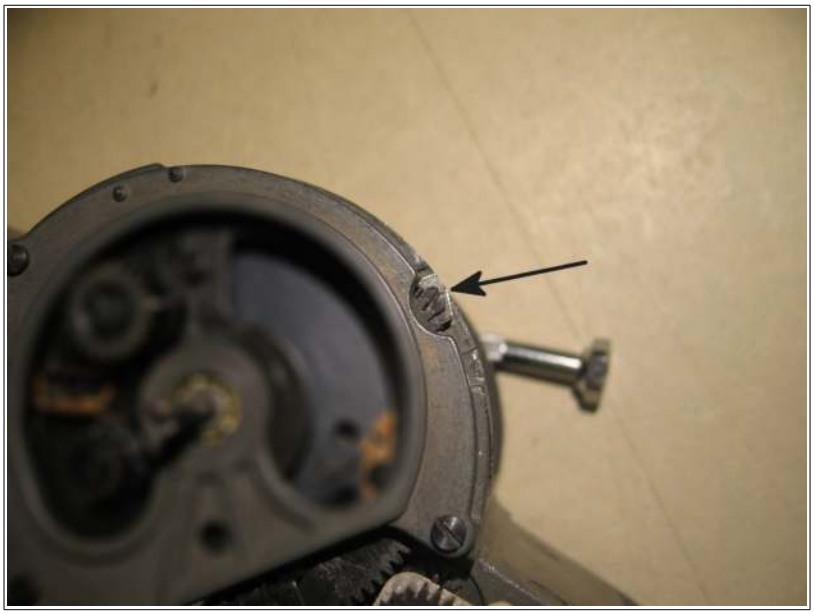
Beware the pins attached to the door are not locked but they come away freely, so it is better to remove them and set them aside.



Before removing the screws 8 and 9 mark the outline of the metal tab, so that it will be easier to find the correct position later, then unscrew the screws 8 and 9 and slide out the tab.



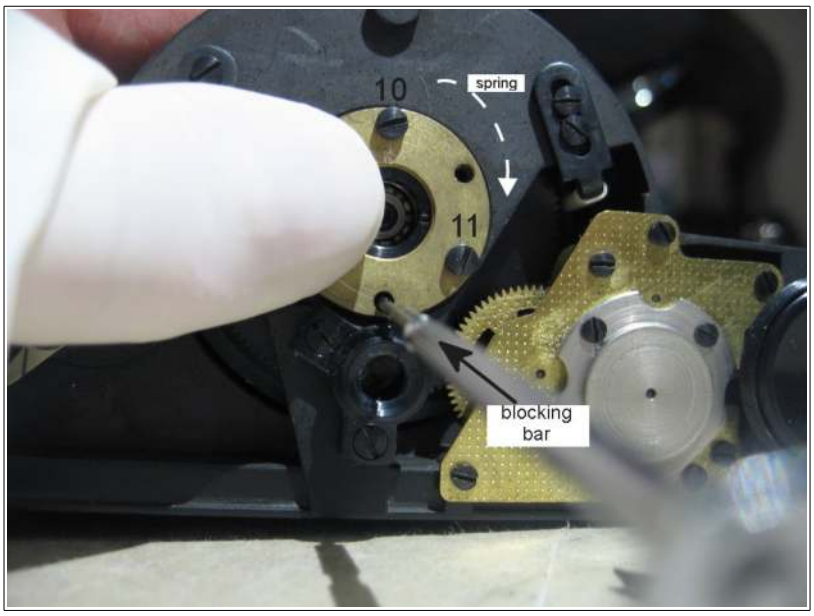
Do the same for the front tab, but in this case it is not necessary to remove the screw, just loosen it and move out the tab. Anyway it's OK if you want to remove the screw and tab.



Optical cylinder (lower side)

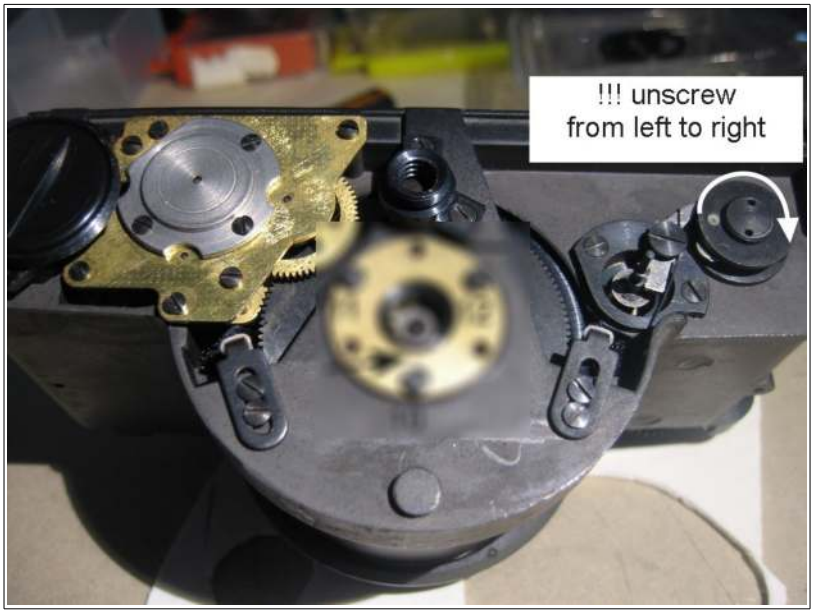
Before unscrewing the screws 10, 11 and 12 mark the position of one of the three screws, this will help to count the turns of the spring beneath (see below).

At this point stuck a screwdriver into one of the three holes without screw, whear a rubber glove and hold firmly the brass cylinder, then unscrew the three screws 10,11 and 12, always putting pressure against the brass cylinder, remove the screwdriver from the hole. The spring that is beneath the brass cylinder will turn from left to right. Let it run slowly and count how many laps it does (in my case about 3).



!!! CAUTION !!!

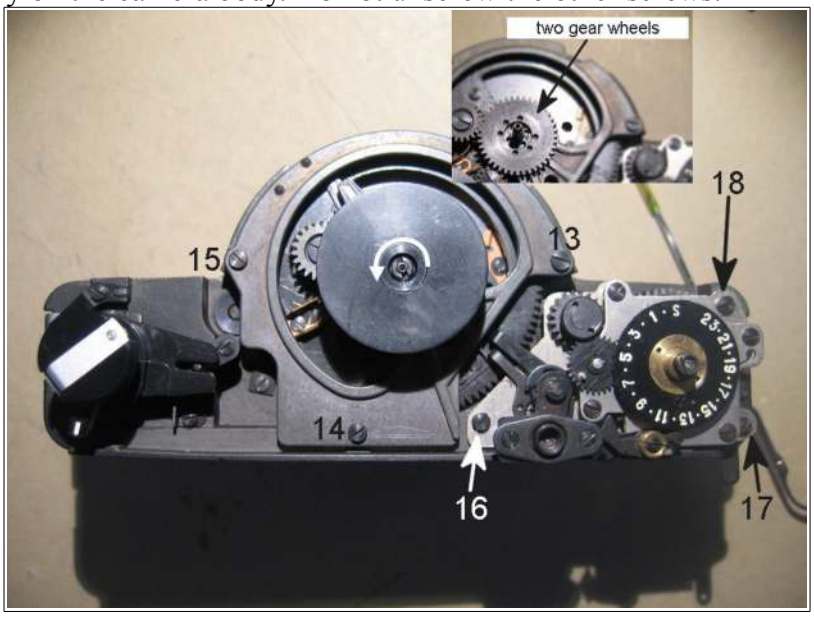
the screw that locks the cocking mechanism is unscrewed in the opposite way, i.e. from left to right the screw head is flat with two small holes, and it also locks the metal disc which limits the run of the cocking lever



Optical cylinder (part above) (The shutter is always in the cocked position)

Unscrew the small central ring nut locking the selectors of times and diaphragms, under which you will find two small gear wheels. Take note of their position and then set them aside.

Unscrew the screws 13, 14 and 15, the ring nut locking the optical cylinder is jammed, so you have to use a bit of force to remove it.
Unscrew the screws 16, 17 and 18 which block the cocking mechanism, they are the only ones that are screwed directly on the camera body. Do not unscrew the other screws.

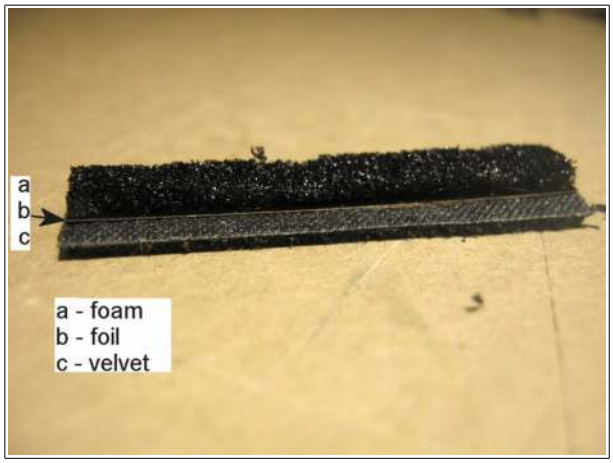


Slide out the cocking mechanism first and then the optical cylinder. On the bottom there is a large sprocket with two holes (a) that you can take away or leave it there.

At this point the lightproof velvets are accessible and probably they look in good condition as in my case.

The real problem is not the velvet but the foam on which they are attached, which is ruined and has lost elasticity.

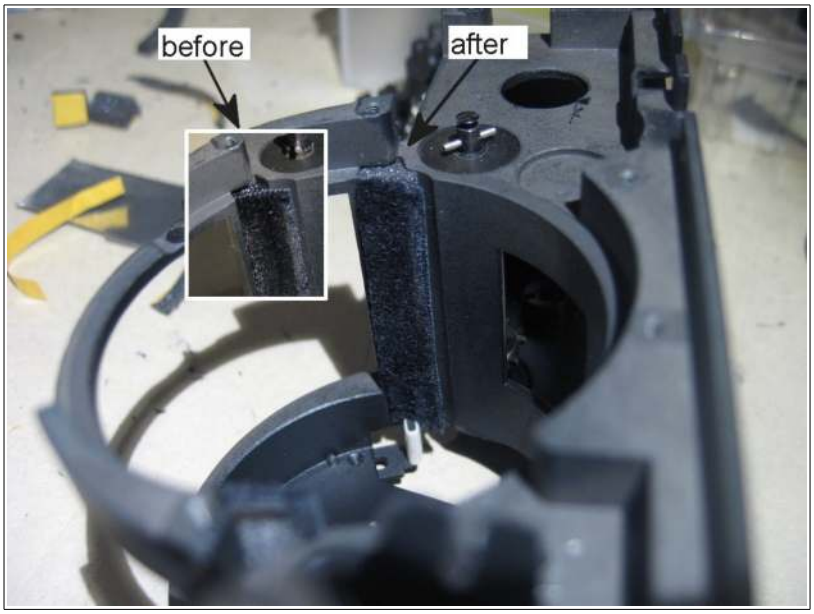
When removing the velvet a bit of foam will remain attached to the camera body



where the most important part is the foam, because it works as a spring which pushes the velvet against the optical cylinder. I have kept the old velvet.

After removing the old foam you must thoroughly clean the copper foil on which the new foam will be attached. As a new foam I have used that one for photographic seals (found on ebay from different vendors). The mine has a self-adhesive side which is what will serve to make it adhere to the camera body, while to attack it to the foil I used "Attack" glue. You can use any type of foam, the important thing is that it does not exert too much pressure against the optical cylinder, because it is likely to change the exposure times.

This is the end result, where it seems that little has changed, actually now the velvet can adhere well to the optical cylinder.



Reassembly

On the bottom of the optical cylinder there are two rubbed pins.

Place the large sprocket, and then slide the optical cylinder in the camera body so that the two rubbed pins become caught in the two holes of the large sprocket.

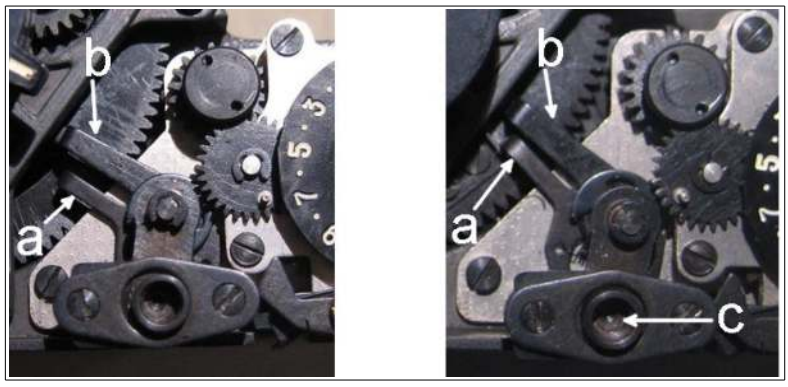
Slide the cocking mechanism and (it is easier to do than to explain) the joints to be observed are the two "things" indicated with an asterisk that interlock with each other, while the two bronze wings at the end of the long spring will fit in their housing in the camera body.

When the cocking mechanism is well tightened to the camera body then screw 16, 17 and 18 screws.

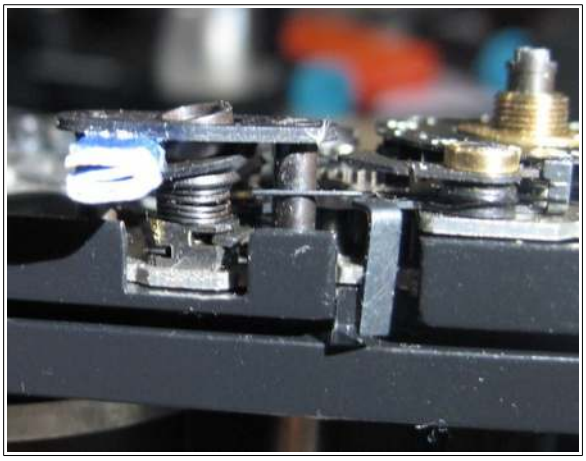
Place the nut holding the optical cylinder on the upper part of the camera and make sure that it locks well into place before tightening the screws 13, 14 and 15.

At this point you need to tension the spring that returns the cocking lever:

- The optical cylinder must be in uncocoked position, that is, the lens pointing right gripping the camera in the normal way;
- Insert the cocking lever on its pin and block it with its screw (! it is screwed to the contrary);
- Lock the shutter button: (left figure) push the lever "a" towards the lever "b" and keep it in that position while pressing the shutter button "c" (right figure), which you have to hold in this position;



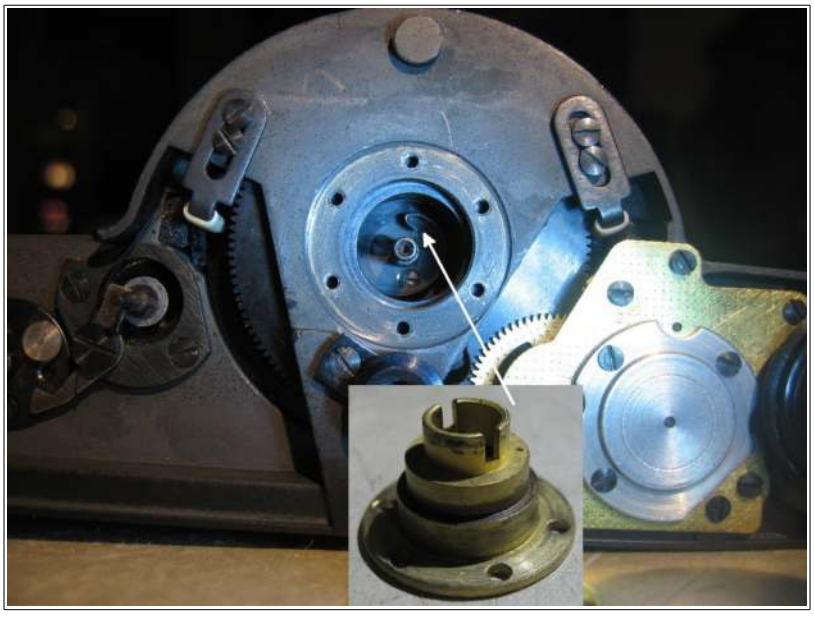
I used a roll of paper to lock the shutter button



- Turn the cocking lever as for cocking the shutter (i.e. anti-clockwise) and turn it for two or three complete revolutions (the lever turns freely because it lacks the metal disc at the bottom);
- While holding the cocking lever, set the metal disc with its screw (! Is screwed in reverse) to the lower pin;

Block the metal tab with the screws 8 and 9, referring to the position marked previously. Similarly lock the front tab.

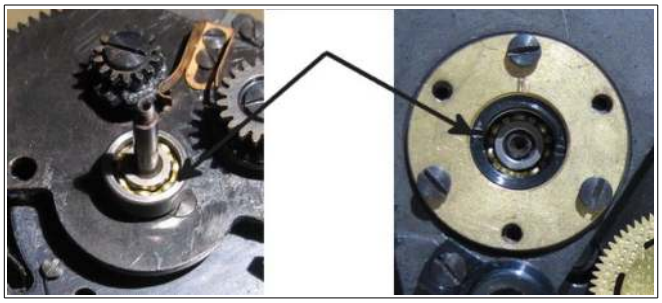
The large brass pin must be inserted at the bottom so that one of his notches goes to get stuck with the folded end of the spring (see arrow in the photo below)



It is very simple, just enter the pin and turn it a bit left and right until it engages.

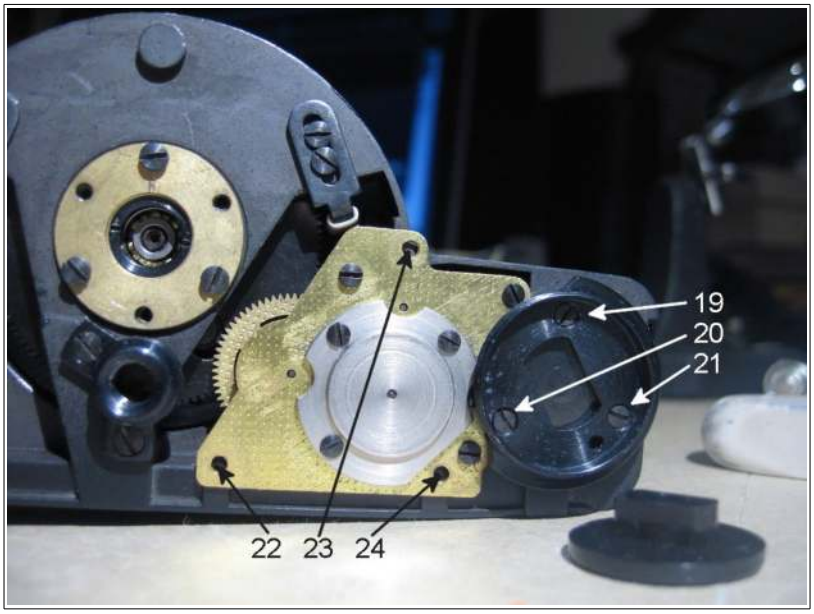
Before screwing the three screws that block it you have to put tension on the spring by turning the large brass pin counterclockwise as many turns as you counted when dismantling it (in my case they were three laps, but I gave it four laps). Use the same method as before, namely wear a rubber glove and lock the pin with the thumb and then use a screwdriver as a lever in one of the holes and turn it. When you are done lock the pin with a screwdriver and screw the screws 10, 11 and 12.

This is the time to lubricate the two ball bearings that support the optical cylinder.



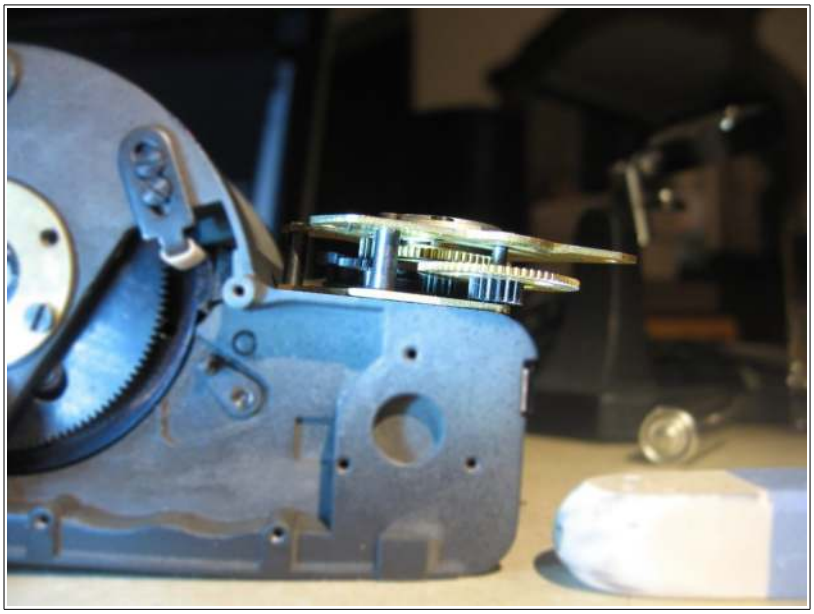
On the top of the camera insert the two small gears that control diaphragms and times, according to the signs that you have made previously, then enter the selectors for the settings of aperture and times, and block them with the small central nut.

Before closing the camera it is useful to lubricate the mechanism controlling for constant speed, which is the brass block that you see below right. I used WD-40 only with a syringe, but it is also possible to use other specific lubricants for precision gears.
Remove the cap of the handle and unscrew the screws 19, 20 and 21, below there are a metal disk and a spring. Then unscrew the screws 22, 23 and 24 and the mechanism will come away.



Place the brass block on the table and unscrew the screws 25, 26 and 27, then lubricate the friction mechanism at the points marked with the arrows, then replace the cap and the screws 25, 26 and 27.

The brass block is a set of clock type gears. I put a little of WD-40 in all the pins.



Before replacing the brass block in position switch the speed dial to slow-speed (it is on the top left of the camera), then position the brass block and screw the screws 22, 23 and 24.

Fit the spring and the metal disk and place the handle attachment, then retighten the screws 19, 20 and 21.

At this point reposition the front (remember the rewind button) and back covers, and all that has been left.

Finished!